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EXAMINER	
LINDSEY, MATTHEW S	

ART UNIT	PAPER NUMBER
2151	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/711,699	MOMTCHILOV ET AL.	
	Examiner	Art Unit	
	MATTHEW S. LINDSEY	2151	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 September 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-48* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-48* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 September 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *1/06/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-48 are pending in this application.

Claim Objections

2. Claim 31 is objected to because of the following informalities: the claim recites the limitation "said hooking" (Claim 31, lines 1-2), there is lack of antecedent basis for this limitation in the claim.

3. Claim 39 is objected to because of the following informalities: the claim recites "the socket call" (Claim 39, lines 1-2), there is lack of antecedent basis for this limitation in the claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 11-13, 14, 19, 25, 34, 40, 44 and 46 are rejected under 35 U.S.C. 102(b) as being anticipated by Berger et al. (US 2003/0087219 A1).

6. With respect to Claim 1, Berger disclosed: "A method for synchronizing data on a device in communication with a client system ([0035], lines 5-10), said method comprising the steps of:

mapping a device in communication with a client system via a USB connection ([0041], lines 1-2, specifically USB connection) into a user session hosted by a server ([0082], lines 3-12, where the client device, PDA, is mapped into a user session hosted by a server, [0092], lines 1-13), said user session including an executing instance of an application ([0092], lines 1-13, specifically integration servlet), said server in communication with said client system using a presentation-level protocol ([0044], lines 2-5, specifically HTTP); and

synchronizing a collection of data on said device in communication with the client system with a collection of data accessible from said user session as a result of the execution of said application instance ([0082], lines 3-12)".

7. With respect to Claim 14, Berger disclosed: "A method for synchronizing data on a device in communication with a client system ([0035], lines 5-10), said client system in communication with a server using a presentation-level protocol ([0044], lines 2-5, specifically HTTP), said method comprising the steps of:

determining the identity of a device in communication with said client system ([0093], lines 4-6);

determining that the device is a member of a registered device class ([0090], lines 1-5, where a device is part of the class of devices that will invoke an agent core if the HotSync process is started);

creating a notification indicating that the device is in communication with the client system ([0090], lines 1-5, where a HotSync trigger is started);

directing the notification to an instance of an application executing within a user session hosted by a server ([0091], lines 1-6, where the agent core connects to the integration servlet and delivers a message requiring synchronization) and

synchronizing a collection of data on said device in communication with the client system with a collection of data accessible from said user session as a result of the execution of said application instance ([0082], lines 3-12)".

8. With respect to Claim 19, Berger disclosed: "A system for synchronizing data on a device in communication with a client system ([0035], lines 5-10), comprising: a client system executing a presentation-level protocol to communicate with a server system ([0044], lines 2-5, specifically HTTP), said client system including an event manager ([0090], lines 1-5, specifically HotSync Manger) to generate event notifications ([0090], lines 1-5, specifically a HotSync Trigger) based on a communication received from the device interfaced with said client system ([0090], lines 1-5, where, in response to communication from a PDA, the HotSync Manager starts a HotSync Trigger); a device

in communication with said client system ([0041], lines 1-2), said device in communication with the client system including a collection of data ([0040], lines 6-9); a server system executing a presentation-level protocol to communicate with said client system ([0044], lines 2-5, specifically HTTP) and host at least one user session on said server system ([0092], lines 1-3), said user session executing an instance of an application used to synchronize the collection of data on said device in communication with the client system with a collection of data accessible from said user session ([0092], lines 5-10)".

9. With respect to Claim 25, Berger disclosed: "An article of manufacture having embodied thereon computer-readable program means for synchronizing data on devices communicating with a client system ([0035], lines 5-10) with data accessible from a server ([0035], lines 5-10), comprising:

computer-readable program means for mapping a device in communication with a client system via a USB connection ([0041], lines 1-2, specifically USB connection) into a user session hosted by a server ([0082], lines 3-12, where the client device, PDA, is mapped into a user session hosted by a server, [0092], lines 1-13), said server in communication with said client using a presentation-level protocol ([0044], lines 2-5, specifically HTTP);

and computer-readable program means for synchronizing a collection of data on said device in communication with the client system with a collection of data accessible

to said session as a result of the execution of said application instance ([0082], lines 3-12)".

10. With respect to Claim 34, Berger disclosed: "An article of manufacture having embodied thereon computer-readable program means for a method for synchronizing data on a device in communication with a client system with a collection of data accessible from a server ([0035], lines 5-10), comprising:

computer-readable program means for determining the identity of a device in communication with the client system ([0093], lines 4-6) via a USB connection ([0041], lines 1-2), said client system communicating with a server using a presentation-level protocol ([0044], lines 2-5, specifically HTTP);

computer-readable program means for determining that the device is a member of a registered device class ([0090], lines 1-5, where a device is part of the class of devices that will invoke an agent core if the HotSync process is started);

computer-readable program means for creating a notification indicating that the device is in communication with the client ([0090], lines 1-5, where a HotSync trigger is started);

computer-readable program means for directing the notification to an instance of an application executing within a user session hosted by a server ([0091], lines 1-6, where the agent core connects to the integration servlet and delivers a message requiring synchronization); and

computer-readable program means for synchronizing a collection of data on said device in communication with the client system with a collection of data accessible to said server as a result of the execution of said application instance ([0082], lines 3-12)".

11. With respect to Claim 40, Berger disclosed: "A method for synchronizing data on a device in communication with a client system ([0035], lines 5-10), said method comprising the steps of:

determining the identity of a device in communication with the client system ([0093], lines 4-6) via a USB connection ([0041], lines 1-2);

determining that the device is a member of a registered device class ([0090], lines 1-5, where a device is part of the class of devices that will invoke an agent core if the HotSync process is started);

creating a notification indicating that the device is in communication with the client system ([0090], lines 1-5, where a HotSync trigger is started);

directing the notification to an application executing on a server ([0091], lines 1-6, where the agent core connects to the integration servlet and delivers a message requiring synchronization); and

synchronizing a collection of data on said device in communication with the client system with a collection of data accessible from said server as a result of the execution of said application ([0082], lines 3-12)".

12. With respect to Claim 44, Berger disclosed: "A system for synchronizing data on a device in communication with a client system ([0035], lines 5-10), comprising: a client system communicating with a server system ([0082], lines 3-7), said client system including an event manager ([0090], lines 1-5, specifically HotSync Manger) to generate event notifications ([0090], lines 1-5, specifically a HotSync Trigger) based on a communication received from the device interfaced with said client system ([0090], lines 1-5, where, in response to communication from a PDA, the HotSync Manager starts a HotSync Trigger) via a USB connection ([0041], lines 1-2); a device in communication with said client system ([0041], lines 1-2), said device in communication with the client system including a collection of data ([0040], lines 6-9); a server system communicating with said client system ([0082], lines 3-7) and executing an application used to synchronize the collection of data on said device in communication with the client system with a collection of data accessible to said server ([0092], lines 5-10)".

13. With respect to Claim 46, Berger disclosed: "A method for synchronizing data on a device in communication with a client system ([0035], lines 5-10), said method comprising the steps of:

providing a client system communicating with a server using a presentation-level protocol ([0044], lines 2-5, specifically HTTP);

intercepting at least one device enumeration method in a session hosted by the server ([0090] – [0092], when a user starts the HotSync process, the HotSync Manager initiates a trigger to start an agent core, which connects to an integration servlet to

commence synchronization with the server), said enumeration method enumerating at least one device communicating with the client ([0082], lines 1-5);

mapping said at least one device in communication with a client system into a user session hosted by the server based on the results of said enumeration method ([0082], lines 3-12, where the client device, PDA, is mapped into a user session hosted by a server, [0092], lines 1-13), said user session including an executing instance of an application ([0082], lines 3-12); and

synchronizing a collection of data on said device in communication with the client system with a collection of data accessible from said user session as a result of the execution of said application instance ([0082], Lines 3-12)".

14. With respect to Claim 11, Berger disclosed: "The method of claim 1 wherein the client system is a proxy client ([0082], lines 3-7, where the client system, or workstation, acts as a proxy between the PDA and server)".

15. With respect to Claim 12, Berger disclosed: "The method of claim 11 wherein the proxy client is hosted on the same server supporting the user session ([0045], lines 1-3, where the web server servers as a front end and acts as the proxy client to access the application server)".

16. With respect to Claim 13, Berger disclosed: "The method of claim 11 wherein the proxy client is hosted on a different server than the server supporting the user session

([0082], lines 3-7, where the workstation, or proxy, and the server are separated by an internet connection)".

Claim Rejections - 35 USC § 103

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

18. Claims 2, 5, 15, 26, 35, 35 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berger in view of Wright (US 7,024,501 B1) and Adderman (US 6,961,942 B1).

19. With respect to Claim 2, Berger did not explicitly state: "wherein said device in communication with the client system uses a WI-FI communication protocol".

However, Wright disclosed: "wherein said device in communication with the client system uses a WI-FI communication protocol (Col. 6, lines 22-25)".

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the data synchronization system of Berger with the teachings of Wright to include support for WI-FI. Motivation to combine these references comes from Adderman where: "it is increasingly recognized that certain advantages arise from the elimination of cables and wires to interconnect devices. Such advantages include

ease of configuration and reconfiguration, due to the elimination of the need to physically add, remove, or displace a physical medium. Furthermore, space that would ordinarily be used for device interconnection media may be given to other uses. Significantly, device mobility is increased through the use of wireless connections" (Col. 1, lines 17-27). Therefore by combining the references, one can increase device mobility by using wireless connections.

20. With respect to Claims 5, 15, 26, 35 and 43 Berger did not explicitly state: "wherein said device in communication with the client system communicates using a wireless USB/ultra-wideband wireless communication protocol".

However, Wright disclosed: "wherein said device in communication with the client system communicates using a wireless USB/ultra-wideband wireless communication protocol (Col. 2, line 56 – Col. 3, line 5, where a wireless device such as a PDA is in wireless communication with a controller, and this can be a USB system and Col. 6, lines 11-13 where ultra wideband can also be used)"

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the data synchronization system of Berger with the teachings of Wright to include support for wireless USB/ultra-wideband. Motivation to combine these references comes from Adderman where: "it is increasingly recognized that certain advantages arise from the elimination of cables and wires to interconnect devices. Such advantages include ease of configuration and reconfiguration, due to the elimination of the need to physically add, remove, or displace a physical medium. Furthermore, space

that would ordinarily be used for device interconnection media may be given to other uses. Significantly, device mobility is increased through the use of wireless connections" (Col. 1, lines 17-27). Therefore by combining the references, one can increase device mobility by using wireless connections.

21. Claims 3-4, 10, 16-17, 27-28, 33, 36-37 and 41-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berger in view of Adderman (US 6,961,942 B1).

22. With respect to Claims 3, 16, 27, 36 and 41, Berger did not explicitly state: "wherein said device in communication with the client system uses an IR serial communication protocol".

However, Adderman disclosed: wherein said device in communication with the client system uses an IR serial communication protocol (Col. 1, lines 29-33)".

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the data synchronization system of Berger with the teachings of Adderman to include support for IR serial communication. Motivation to combine these references comes from Adderman where: "it is increasingly recognized that certain advantages arise from the elimination of cables and wires to interconnect devices. Such advantages include ease of configuration and reconfiguration, due to the elimination of the need to physically add, remove, or displace a physical medium. Furthermore, space that would ordinarily be used for device interconnection media may be given to other

uses. Significantly, device mobility is increased through the use of wireless connections" (Col. 1, lines 17-27). Therefore by combining the references, one can increase device mobility by using wireless connections.

23. With respect to Claims 4, 17, 28, 37 and 42, Berger did not explicitly state: "wherein said device in communication with the client system uses a Bluetooth serial communication protocol".

However, Adderman disclosed: "wherein said device in communication with the client system uses a Bluetooth serial communication protocol (Col. 1, lines 47-48)".

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the data synchronization system of Berger with the teachings of Adderman to include support for IR serial communication. Motivation to combine these references comes from Adderman where: "it is increasingly recognized that certain advantages arise from the elimination of cables and wires to interconnect devices. Such advantages include ease of configuration and reconfiguration, due to the elimination of the need to physically add, remove, or displace a physical medium. Furthermore, space that would ordinarily be used for device interconnection media may be given to other uses. Significantly, device mobility is increased through the use of wireless connections" (Col. 1, lines 17-27). Therefore by combining the references, one can increase device mobility by using wireless connections.

24. With respect to Claim 10, Berger did not explicitly state: "comprising the further step of: binding, at the client system, an identifier of a virtual communication channel to a mapping request prior to mapping the device to a user session".

However, Adermann disclosed: "comprising the further step of: binding, at the client system, an identifier of a virtual communication channel to a mapping request (Col. 11, lines 9-19, where the server refers to the host computer which binds a socket to a specified port) prior to mapping the device to a user session (Col. 11, lines 36-44, where ports are specified before a client device attempts to connect, and thus is prior to mapping the device to a user session)".

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the data synchronization system of Berger with the teachings of Adderman to include support for binding an identifier of a virtual communications channel prior to mapping a device to a user session. Motivation to combine these comes from Adderman, where "This mechanism does not require prior SDP queries" (Col. 11, lines 43-44). Therefore by combining the references, a device does not have to query a client system before connecting.

25. With respect to Claim 33, Berger did not explicitly state: "further comprising: computer-readable program means for binding, at the client system, an identifier of a virtual communication channel to a mapping request prior to mapping the device to a user session".

However, Adermann disclosed: "further comprising: computer-readable program means for binding, at the client system, an identifier of a virtual communication channel to a mapping request (Col. 11, lines 9-19, where the server refers to the host computer which binds a socket to a specified port) prior to mapping the device to a user session (Col. 11, lines 36-44, where ports are specified before a client device attempts to connect, and thus is prior to mapping the device to a user session)".

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the data synchronization system of Berger with the teachings of Adderman to include support for binding an identifier of a virtual communications channel prior to mapping a device to a user session. Motivation to combine these comes from Adderman, where "This mechanism does not require prior SDP queries" (Col. 11, lines 43-44). Therefore by combining the references, a device does not have to query a client system before connecting.

26. Claims 6, 9, 18, 21, 22, 29, 32 and 38-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berger in view of North (US 7,325,026 B1).

27. With respect to Claims 6 and 18, Berger did not explicitly state: "wherein said application instance uses socket communication for inter-process communications and step (b or e, from Claim 18) further comprises the step of: (b-I, e-I, from Claim 18) hooking a socket call within the session".

However, North disclosed: "wherein said application instance uses socket communication for inter-process communications (Col. 2, lines 9-12) and step (b) further comprises the step of: (b-I) hooking a socket call within the session (Col. 2, lines 9-12)".

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the data synchronization system of Berger with the teachings of North to include support for using socket calls for inter-process communications and to hook socket calls within a session. Motivation to combine these comes from sockets being the de facto standard for inter-process communications. Motivation also comes from North, where "Upon a completion of call, control is returned and the application is updated to reflect the actual performance of the call. The call is also completed notwithstanding any termination of communication monitoring, retaining the transparency of the monitoring system to the application. One embodiment monitors TCP/IP communications. More particularly, socket interface routines corresponding to various socket calls made by an application are hooked, and the performance of these socket calls is captured and recorded for analysis" (Col. 2, lines 3-12). Therefore by combining the references, one can monitor the performance of the socket calls transparently to the application.

28. With respect to Claim 9, Berger did not explicitly state: "wherein said application uses socket communication for inter-process communications and step (b) further comprises the step of: (b-I) hooking a socket call on the server console".

However, North disclosed: "wherein said application uses socket communication for inter-process communications (Col. 2, lines 9-12) and step (b) further comprises the step of: (b-I) hooking a socket call on the server console (Col. 2, lines 9-12)".

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the data synchronization system of Berger with the teachings of North to include support for using socket calls for inter-process communications and to hook socket calls within a session. Motivation to combine these comes from sockets being the de facto standard for inter-process communications. Motivation also comes from North, where "Upon a completion of call, control is returned and the application is updated to reflect the actual performance of the call. The call is also completed notwithstanding any termination of communication monitoring, retaining the transparency of the monitoring system to the application. One embodiment monitors TCP/IP communications. More particularly, socket interface routines corresponding to various socket calls made by an application are hooked, and the performance of these socket calls is captured and recorded for analysis" (Col. 2, lines 3-12). Therefore by combining the references, one can monitor the performance of the socket calls transparently to the application.

29. With respect to Claim 21, Berger disclosed: "synchronizing of the collection of data on the client-attached device and the collection of data accessible from the server session ([0082], lines 3-12)"

Berger did not explicitly state: "wherein said application instance uses socket communication for inter-process communications", or "the synchronizing of the collection of data on the client-attached device and the collection of data accessible from the server session hooks a socket call made by the application instance".

However, North disclosed: "wherein said application instance uses socket communication for inter-process communications (Col. 2, lines 9-12)" and "the synchronizing of the collection of data on the client-attached device and the collection of data accessible from the server session hooks a socket call made by the application instance (Col. 2, lines 9-12)".

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the data synchronization system of Berger with the teachings of North to include support for using socket calls for inter-process communications and to hook socket calls within a session. Motivation to combine these comes from sockets being the de facto standard for inter-process communications. Motivation also comes from North, where "Upon a completion of call, control is returned and the application is updated to reflect the actual performance of the call. The call is also completed notwithstanding any termination of communication monitoring, retaining the transparency of the monitoring system to the application. One embodiment monitors TCP/IP communications. More particularly, socket interface routines corresponding to various socket calls made by an application are hooked, and the performance of these socket calls is captured and recorded for analysis" (Col. 2, lines 3-12). Therefore by

combining the references, one can monitor the performance of the socket calls transparently to the application.

30. With respect to Claim 22, the combination of Berger and North disclosed: "The system of claim 21 wherein the socket call is hooked within the user session (North, Col. 2, lines 9-12)".

31. With respect to Claims 29 and 38, Berger disclosed: "synchronizing a collection of data on said device in communication with the client system ([0082], lines 3-12)"

Berger did not explicitly state: "wherein said application instance uses socket communication for inter-process communications", or "computer-readable program means for hooking a socket call within the session".

However, North disclosed: "wherein said application instance uses socket communication for inter-process communications (Col. 2, lines 9-12)", and "computer-readable program means for hooking a socket call within the session (Col. 2, lines 9-12)".

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the data synchronization system of Berger with the teachings of North to include support for using socket calls for inter-process communications and to hook socket calls within a session. Motivation to combine these comes from sockets being the de facto standard for inter-process communications. Motivation also comes from North, where "Upon a completion of call, control is returned and the application is

updated to reflect the actual performance of the call. The call is also completed notwithstanding any termination of communication monitoring, retaining the transparency of the monitoring system to the application. One embodiment monitors TCP/IP communications. More particularly, socket interface routines corresponding to various socket calls made by an application are hooked, and the performance of these socket calls is captured and recorded for analysis" (Col. 2, lines 3-12). Therefore by combining the references, one can monitor the performance of the socket calls transparently to the application.

32. With respect to Claim 32, Berger disclosed: "the computer-readable program means for synchronizing a collection of data on said device in communication with the client system ([0082], lines 3-12)".

Berger did not explicitly state: "wherein said application instance uses socket communication for inter- process communications", "or computer-readable program means for hooking a socket call on the server console".

However, North disclosed: "wherein said application uses socket communication for inter-process communications (Col. 2, lines 9-12)" and "or computer-readable program means for hooking a socket call on the server console (Col. 2, lines 9-12)"

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the data synchronization system of Berger with the teachings of North to include support for using socket calls for inter-process communications and to hook socket calls within a session. Motivation to combine these comes from sockets

being the de facto standard for inter-process communications. Motivation also comes from North, where "Upon a completion of call, control is returned and the application is updated to reflect the actual performance of the call. The call is also completed notwithstanding any termination of communication monitoring, retaining the transparency of the monitoring system to the application. One embodiment monitors TCP/IP communications. More particularly, socket interface routines corresponding to various socket calls made by an application are hooked, and the performance of these socket calls is captured and recorded for analysis" (Col. 2, lines 3-12). Therefore by combining the references, one can monitor the performance of the socket calls transparently to the application.

33. With respect to Claim 39, Berger did not explicitly state: "wherein the socket call is hooked on the server console".

However, North disclosed: "wherein the socket call is hooked on the server console (Col. 2, lines 9-12)".

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the data synchronization system of Berger with the teachings of North to include support for using socket calls for inter-process communications and to hook socket calls within a session. Motivation to combine these comes from sockets being the de facto standard for inter-process communications. Motivation also comes from North, where "Upon a completion of call, control is returned and the application is updated to reflect the actual performance of the call. The call is also completed

notwithstanding any termination of communication monitoring, retaining the transparency of the monitoring system to the application. One embodiment monitors TCP/IP communications. More particularly, socket interface routines corresponding to various socket calls made by an application are hooked, and the performance of these socket calls is captured and recorded for analysis" (Col. 2, lines 3-12). Therefore by combining the references, one can monitor the performance of the socket calls transparently to the application.

34. Claims 7-8, 23-24 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berger in view of North and further in view of Jones (US 7,051,108 B1).

35. With respect to Claims 7, 23 and 30, the combination of Berger and North did not explicitly state: "wherein said hooking is virtual loop-back address hooking".

However, Jones disclosed: "wherein said hooking is virtual loop-back address hooking (Col. 2, lines 44-50, where a hook is used to intercept local, or loopback, communications before they are sent to the network)".

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the data synchronization system of Berger and North with the teachings of Jones to include support for virtual loop back address hooking. Motivation to combine these comes from Jones, where "An advantage of this approach is that the connection oriented protocol is bypassed for data transfer only when connection

oriented protocol is not necessary, namely when the connection is local. However, if the connection is not local, a conventional socket connection is formed. Thus, performance for local connections is greatly improved without having to rewrite applications to use sockets that do not use connection oriented protocol, such as UNIX-domain sockets. In addition, local and network clients are supported by the invention." (Col. 2, lines 56-65). Therefore by combining the references, the overhead associated with using a connection oriented protocol is bypassed for local connections where it is unnecessary, thus improving local transfer performance.

36. With respect to Claims 8 and 24, the combination of Berger and North did not explicitly state: "wherein said hooking is virtual IP address hooking".

However, Jones disclosed: "wherein said hooking is virtual IP address hooking (Col. 2, lines 44-50, where a hook is used to intercept local communications, local communications being on a virtual IP address since there is no physical interface associated with the local address)".

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the data synchronization system of Berger and North with the teachings of Jones to include support for virtual address hooking. Motivation to combine these comes from Jones, where "An advantage of this approach is that the connection oriented protocol is bypassed for data transfer only when connection oriented protocol is not necessary, namely when the connection is local. However, if the connection is not local, a conventional socket connection is formed. Thus, performance

for local connections is greatly improved without having to rewrite applications to use sockets that do not use connection oriented protocol, such as UNIX-domain sockets. In addition, local and network clients are supported by the invention." (Col. 2, lines 56-65). Therefore by combining the references, the overhead associated with using a connection oriented protocol is bypassed for local connections where it is unnecessary, thus improving local transfer performance.

37. Claims 20, 45 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berger in view of Zintel (US 6,910,068 B2).

38. With respect to Claims 20 and 45, Berger did not explicitly state: "wherein said event manager is a Plug and Play event manager and said event notification is a Plug and Play event notification".

However, Zintel disclosed: "wherein said event manager is a Plug and Play event manager (Col. 6, line 60 – Col. 7, line 14, where a user control point can be a PC, and includes an event manager, or rehydrator and Col. 4, lines 52-56, where the user control point is part of a plug and play system) and said event notification is a Plug and Play event notification (Col. 21, lines 37-42, where the rehydrator receives event notifications, and Col. 4, lines 52-56 where the event notifications are plug and play notifications)".

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the data synchronization system of Berger with the teachings of

Zintel to include support for plug and play event managers and notifications. Motivation to combine these references comes from Zintel, where "Universal Plug and Play (UPnP) is an open network architecture that is designed to enable simple, ad hoc communication among distributed devices and services from many vendors" (Col. 4, lines 58-61). Therefore by combining the references one can use universal plug and play to enable simple ad hoc communication among distributed devices and services from many vendors.

39. With respect to Claim 47, the combination of Berger and Zintel disclosed: "The method of claim 45 wherein said device in communication with the client system is communicating over a USB connection (Berger, [0041], lines 1-2, specifically USB connection)".

40. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Berger in view of Adderman, and further in view of Jones.

41. With respect to Claim 31, the combination of Berger and Adderman did not explicitly state: "wherein said hooking is virtual IP address hooking".

However, Jones disclosed: "wherein said hooking is virtual IP address hooking (Col. 2, lines 44-50, where a hook is used to intercept local communications, local communications being on a virtual IP address since there is no physical interface associated with the local address)".

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the data synchronization system of Berger and Adderman with the teachings of Jones to include support for virtual address hooking. Motivation to combine these comes from Jones, where "An advantage of this approach is that the connection oriented protocol is bypassed for data transfer only when connection oriented protocol is not necessary, namely when the connection is local. However, if the connection is not local, a conventional socket connection is formed. Thus, performance for local connections is greatly improved without having to rewrite applications to use sockets that do not use connection oriented protocol, such as UNIX-domain sockets. In addition, local and network clients are supported by the invention." (Col. 2, lines 56-65). Therefore by combining the references, the overhead associated with using a connection oriented protocol is bypassed for local connections where it is unnecessary, thus improving local transfer performance.

42. Claim 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over Berger in view of North and further in view of Chu (US 6,970,924 B1).

43. With respect to Claim 48, Berger did not explicitly state: "wherein said enumeration method is intercepted via a hook DLL".

However, North disclosed: "wherein said enumeration method is intercepted via a hook (Col. 2, lines 9-12)"

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the data synchronization system of Berger with the teachings of North to include support for hooking socket calls within a session. Motivation also comes from North, where "Upon a completion of call, control is returned and the application is updated to reflect the actual performance of the call. The call is also completed notwithstanding any termination of communication monitoring, retaining the transparency of the monitoring system to the application. One embodiment monitors TCP/IP communications. More particularly, socket interface routines corresponding to various socket calls made by an application are hooked, and the performance of these socket calls is captured and recorded for analysis" (Col. 2, lines 3-12). Therefore by combining the references, one can monitor the performance of the socket calls transparently to the application.

The combination of Berger and North did not explicitly state: "a hook DLL".

However, Chu disclosed: "a hook DLL (Col. 5, lines 3-9, specifically hook DLL ARHook32.dll)".

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the data synchronization system of Berger in view of North with the teachings of Chu to include support for using a hook DLL. Motivation to combine these references comes from Adermann, where: "Winsock (Microsoft brand "WINDOWS" Sockets) is a programming interface (API) that traditionally allows a "WINDOWS" application to access the TCP/IP protocol. Winsock routines are ordinarily implemented

as a dynamic link library" (Col. 6, lines 46-51). Therefore, by combining the references to implement monitoring of TCP/IP communications by hooking socket calls (North, Col. 2, lines 8-12), one can follow traditional standards by implementing the hook as a dynamic link library.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MATTHEW S. LINDSEY whose telephone number is (571)270-3811. The examiner can normally be reached on Mon-Thurs 7:30-5, Fridays 7:30-1.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (571) 272-3964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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MSL
6/5/2008

/J. Bret Dennison/

Examiner, Art Unit 2143